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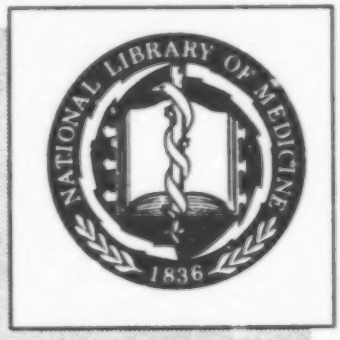

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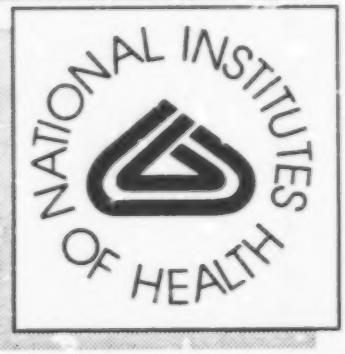

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Laboratory Animal Welfare

Supplement IV

January 1988

72 Selected Citations

Compiled by Fritz P. Gluckstein, D.V.M., M.L.S.
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U.S. Department of Health and Human Services
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LABORATORY ANIMAL WELFARE

This is the fourth supplement to a selective annotated bibliography on laboratory animal welfare issued in January 1984, SBS No. 1984-1. The first supplement was issued in January 1985, SBS No. 1985-1; the second in January 1986, SBS No. 1986-1; and the third in January 1987, SBS No. 1987-1.

Items were selected for inclusion because they were judged to be representative of the most significant of those providing recent information or because they were considered to be useful guides to additional literature on the subject. The period covered is October 1986 through October 1987. A number of items published during the first three quarters of 1986 have also been included.

SAMPLE CITATIONS

Citations in this bibliographic series are formatted according to rules established for *Index Medicus*. Sample journal and monograph citations appear below. For journal articles written in a foreign language, the English translation of the title is placed in brackets; for monographs, the title is given in the original language. In both cases the language of publication is shown by a three letter abbreviation appearing at the end of the citation.

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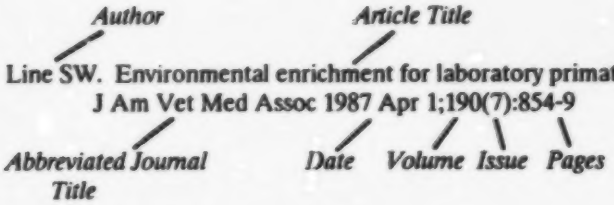

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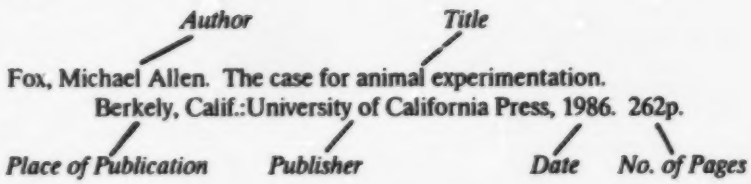

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Journal Articles

I. Historical Articles

Maehle AH. [The literary scholar Christlob Mylius and his defense of medical animal experimentation in the 18th and 19th century]. Medizinhist J 1986;21(3-4):269-87 [Ger]

An analysis of the German writer, poet, and editor Christlob Mylius' (1722-1734) justification of animal experimentation. His work was republished in 1880 to counteract the antivivisection movement originating in England. 70 references.

Maehle AH. [Scientific and moral justification of toxicologic animal trials in the 17th century. Johann Jakob Wepfer and Johann Jakob Harder]. Gesnerus 1986;43(3-4):213-21 [Ger]

An examination of the arguments in favor of animal experimentation advanced by the first two scientists using animals in the study of poisons. 21 references.

Richards S. Drawing the life-blood of physiology: vivisection and the physiologists' dilemma, 1870-1900. Ann Sci 1986;43(1):27-56

During the final third of the 19th century, English physiologists attained international prominence. Their experiments and publication of Burdon Sanderson's Handbook for the Physiological Laboratories (1873) spurred the activities of antivivisectionists. 107 footnotes.

II. Ethical and Philosophic Aspects

The case for the use of animals in biomedical research [letters]. N Engl J Med 1987 Feb 26;316(9):551-3

Replies by P. Bearmon, R. Dresser, T.C. Evans, R.W. Ford, C.M. Hutchins, R.I. Masta, G.E. Pence, R.B. Swenson, and B. Trvett to Cohen C, "The case for the use of animals in biomedical research." [N Engl J Med 1986 Oct 2;315(14):865-70] (*see* SBS No. 1987-1, p. 2) Followed by a response by Cohen.

Harwood KV. Nursing research using animal subjects: practical and ethical considerations. Oncol Nurs Forum 1987 Mar-Apr;14(2):57-62

After discussing examples of nursing knowledge gained through animal experimentation, the author traces the evolution of ethical viewpoints on animal use from absolute dominionism (ancient Greece, the Bible) through anthropocentric consequentialism (Kant), humane beneficience (most present animal welfare proponents), utilitarianism (Peter Singer) to abolitionism (Tom Regan). 24 references.

McGregor D. Ethics of animal experimentation. Drug Metab Rev 1986;17(3-4):349-61

A philosophic discourse on the concept of ethics followed by a discussion of moral and practical aspects of human and animal experimentation. The author concludes that laboratory animals will continue to play a role in biomedical research. 7 references.

III. Animal Rights

Grubb RL Jr. Animal rights versus medical research. Neurosurgery 1987 May;20(5):809-10

The writer discusses the evolution of the animal rights movement and urges research scientists and above all practicing physicians to educate the public about the nature and necessity of animal experimentation.

Kronfield DS ; Parr CP. Ecologic and symbiotic approaches to animal welfare,

animal rights, and human responsibility. J Am Vet Med Assoc 1987 Sep 15;191(6): 660-4

Although intended for veterinary students and practicing veterinarians, this article contains much of interest to the research scientist. "It aims...to reach some rapport with the middle ground of the animal rights field and to reject parts of its extremes." 21 references.

Mulvaney K. The other side of animal rights. New Sci 1986 Apr 3;109(1502):52-3

An ardent plea for rational, peaceful debate of animal experimentation. Such debate, the author believes, will counteract the terrorism of certain radical activists.

Narveson J. A case against animal rights. Adv Anim Welfare Sci 1986-7:191-213

A fellow philosopher opposes Tom Regan's arguments for animal rights. 3 references.

Regan T. The case for animal rights. Adv Anim Welfare Sci 1986-7:179-89

A philosophic exposition calling for the "total abolition of animal use in science, the total dissolution of commercial animal agriculture, and the total elimination of commercial and sport hunting and trapping."

Samuels WM. Transformation of society's beliefs is goal of animal rights movement. Physiologist 1986 Jun;29(3):43-4

The author discusses the activities of animal rights activists and calls on the scientific community to counteract such activities through education of legislators, the media, and above all the public.

Trull FL. Animal "rights" v. animal research: a worldwide movement challenges biomedical science. Prog Clin Biol Res 1987;229:327-36

The president of the Foundation for Biomedical Research reviews the "animal liberation" movement in the United States and briefly deals with its impact in other countries. She also discusses the aims and activities of the National Association for Biomedical Research (NABR) and the Foundation for Biomedical Research.

IV. Laws, Regulations, Codes, and Guidelines

Brown GE Jr. George E. Brown, Jr. ...California Congressman shares views on Animal Welfare Act amendments, laboratory vandalism, APHIS funding [interview by William M. Samuels]. Physiologist 1986 Jun;29(3):35-7

Representative Brown, who introduced the House bill amending the Animal Welfare Act, answers questions regarding the reactions by scientists and animal welfare advocates, the effect of the amendments, enforcement of the Animal Welfare Act, and legislation he introduced to curb vandalism by opponents of animal experimentation.

Crossing RJ. Control of the scientific use of animals in Victoria. Aust Vet J 1987 May; 64(5):148

A review of the Prevention of Cruelty to Animals Act of the Australian state Victoria. The Act deals with Animal Experimentation Ethics Committees, professional qualifications of experimenters, and conditions in breeding establishments. It also prohibits certain scientific procedures.

Guidelines for veterinary surgeons employed in scientific procedure establishments and breeding and supplying establishments. British Veterinary Association and the Royal College of Veterinary Surgeons. Vet Rec 1987 Jan 3;120(1):17-9

The guidelines, prepared jointly by the British Veterinary Association and the Royal College of Veterinary Surgeons: (1) define the role of the "Named Veterinary Surgeon" required by law to

advise research, breeding, and supplying establishments on laboratory animal welfare; (2) clarify the responsibilities of veterinarians in the field of laboratory animal science; and (3) provide a 15-item recommended reading list.

Principles of humane animal experimentation [letter]. ATLA 1987 Jun;14(4):386-91

Letter from Medical Science Research, St. Leonard's House, Lancaster proposing six fundamental principles for guidance of experimenters. The principles bear on: (1) the responsibility of the experimenter; (2) the value of a proposed experiment; (3) the choice of an appropriate animal species; (4) the minimization of distress; (5) limitation of animal number; and (6) the general welfare of animals.

Rozemond H. Laboratory animal protection: the European Convention and the Dutch Act. Vet Q 1986 Oct;8(4):346-9

A comparison of the Council of Europe's convention for the protection of vertebrate animals with the Dutch Experimental Animals Act. Special attention is given to animal protection officers and the assessment of pain. 3 references.

Rozmiarek H. Current and future policies regarding laboratory animal welfare. Invest Radiol 1987 Feb;22(2):175-9

A discussion of the interpretation and implementation of animal welfare laws and voluntary policies in the United States. 15 references.

Sondergaard E. Danish legislation on laboratory experiments. ATLA 1986 Mar; 13(3):206-7

An outline of the Danish Animal Experiments Act of 1977 and a list of proposed amendments.

Weber H. Democratic expression of public opinion on animal experimentation. J Med Primatol 1986;15(6):379-89

A review of the events causing 70% of the Swiss population to reject a constitutional amendment abolishing animal experimentation. It is thought that the rejection was due to frank and comprehensive information provided by the research community and the scientists' willingness to deal with animal welfare issues. 8 references.

V. Animal Research Committees

Balls M. Animals (Scientific Procedures) Act 1986; the Animal Procedures Committee. ATLA 1986 Sep;14(1):6-13

A discourse on the Animal Procedures Committee, a statutory body established to advise the British Government on the administration of the Animals (Scientific Procedures) Act. 58 references.

Orlans FB. Research protocol review for animal welfare. Invest Radiol 1987 Mar; 22(3):253-8

The article addresses the issues: "How is protocol review conducted? What do [institutional animal care and use committees] look for in their review, and how can investigators be responsive to [committee] concerns? In what ways can a research protocol be modified to minimize animal pain and distress?" 17 references.

Protocol review: survival surgical procedures. Lab Anim (New York) 1987 Sep;16(6):25-6

A case study of a protocol review involving survival surgical procedures. An outside consultant recommended approval after initial rejection by the Institutional Animal Care and Use Committee.

VI. Animal Experimentation in Specific Disciplines

Cromie BW. Drug research and development in the pharmaceutical industry. Br J Clin Pharmacol 1986;22 Suppl 1:9s-14s

The article includes a discussion of the increasing prominence of organizations opposing all animal experimentation which the author feels threatens pharmaceutical research in the United Kingdom. 14 references.

Dreesen RG. Considerations in the humane use of laboratory animals in radiology research. Radiol Technol 1987 Mar-Apr; 58(4):347-50

A report on the procurement, housing, care, and use of laboratory animals in the Department of Radiology at the Indiana University Medical Center, followed by a 15-item selected bibliography on laboratory animal care and handling. 2 references.

Fielder RJ ; Gaunt IF ; Rhodes C ; Sullivan FM ; Swanston DW. A hierarchical approach to the assessment of dermal and ocular irritancy. A report by the British Toxicology Society working party on irritance. Hum Toxicol 1987;6(4):269-78

The authors propose a method that would ensure the humane use of laboratory animals in the testing of dermal and ocular irritants. Their primary aim is minimizing pain and distress rather than reduction of the number of animals used. 40 references.

Hofer-Bosse T ; Scharmann W. Numbers of animals used in toxicological experiments - with particular reference to the Federal Republic of Germany. ATLA 1986 Mar; 13(3):212-19

A review of the extent of animal experimentation in toxicity testing in Europe, particularly West Germany. The authors call for legislation requiring accurate recording of the number of animals used in biomedical research. 31 references.

Pincus HA ; Fine T ; Pardes H ; Goodwin FK. The animal rights movement: a research perspective [editorial]. Am J Psychiatry 1986 Dec;143(12):1585-6

A brief review of animal experimentation's past and present role in psychiatric research. 1 reference.

Wise SM. Use of animals in research [letter]. Am J Psychiatry 1987 Aug; 144(8):1111

A reply to Pincus and associates and their rebuttal.

Zimmerman M. Ethical principles for the maintenance and use of animals in neuroscience research [editorial]. Neurosci Lett 1987 Jan 2;73(1):1

The editors of *Neuroscience Letters* will not accept manuscripts from scientists that have failed to adhere to the principles listed.

VII. Replacement, Reduction, Refinement

Bertrand M. [Ideas on methods replacing animal experimentation]. Sci Vet Med Comp 1986;88(3):87-98 [Fre]

A discussion of the ethics of laboratory animal use and the concept of the biologic model, followed by a survey of various alternatives to animal experimentation. 13 references.

Chevalier BL ; Hubert F ; Pierre R. [Alternative methods in animal experimentation: OPAL tenets]. Sci Vet Med Comp 1986;88(3):121-30 [Fre]

Goals and tenets of the Oeuvre Pour L'Assistance aux Animaux (OPAL) or the Association for the Welfare of Laboratory Animals founded in 1986 by prominent representatives of medicine, the life sciences, and the humanities. 3 references.

Clarke KA. The use of microcomputer simulations in undergraduate neurophysiology experiments. ATLA 1987 Mar;14(3):134-40

A description of a microcomputer-based simulation technique which retains all the elements of the "real experiment" without requiring laboratory skills and expensive equipment. 6 references.

Eckert J. [Alternatives to animal experiments in parasitology]. DTW 1986 Oct 8;93(9): 380-2 [Ger]

Various animal testing alternatives are proposed; among them cryopreservation, in vitro culture, cell culture, and recombinant DNA techniques for mass production of antigens. 39 references.

Hatch OG. Biomedical research. Am Psychol 1987 Jun;42(6):591-2

Senator Hatch discusses the Office of Technology Assessment report "Alternatives to Animal Use in Research, Testing and Education" he initiated (*see* SBS No. 1987-1, p.16) and calls for more sensitive and compassionate animal research.

Human tissue as an alternative in biomedical research. ATLA 1987 Jun; 14(4):375-85

Results of a British public opinion survey concerning the use of human tissues from healthy volunteers, patients undergoing operations, deceased persons, and aborted fetuses in place of laboratory animals.

Legay JM. [Usefulness and limitations of mathematical models in animal experiments]. Sci Vet Med Comp 1986; 88(3):151-5 [Fre]

After a general discussion of the use of models as research tools, the author examines the role of mathematical models as alternatives to animal experimentation. 11 references.

Magloire H ; Calle A ; Bouvier M ; Exbrayat P ; Guiraldeno P ; Hartman DJ. [Replacement models in odontostomatologic research]. Sci Vet Med Comp 1986;88(3):131-41 [Fre]

A discussion of in vitro biocompatability testing of materials used in restorations and protheses. 16 references.

Pearson RM. In-vitro techniques: can they replace animal testing? Hum Reprod 1986 Dec;1(8):559-60

After discussing various in vitro techniques, the author concludes that while unlikely to replace animal experimentation entirely, such techniques have the potential of reducing the number of animals used in screening of new drugs. 9 references.

Rowan AN. Research protocol design and laboratory animal research. Invest Radiol 1987 Jul;22(7):615-7

The author discusses refinement of animal experiments with regard to research design and techniques as well as number and species of animals used. 14 references.

Silcock SR. Refinement of experimental procedures. ATLA 1986 Dec;14(2):72-84

A discussion of refinement aimed at the elimination or reduction of pain and stress in laboratory animals. The writer deals with the reduction of environmental and handling stress, the use of anesthesia and analgesia and the minimization of adverse stimuli, distressful techniques, and severe endpoints. 43 references.

Stephens M. The significance of alternative techniques in biomedical research: an analysis of Nobel Prize awards. Adv Anim Welfare Sci 1986-87:19-31

An analysis of the methods used in research leading to Nobel Prize awards in medicine and physiology. In 50 out of 76 instances, no live vertebrates were used. 19 references.

The US Congress Office of Technology Assessment report on Alternatives to Animal Use in Research, Testing and Education. ATLA 1987 Jun;14(4):289-374

A critical review of the report (see SBS No. 1987-1, p.16) by ten British authors.

Verine H. [Reflections on alternative methods in animal experimentation: advantages of biologic theory]. Sci Vet Med Comp 1986;88(3):157-62 [Fre]

The author presents ideas on the place of animals in biologic research and discusses alternative theoretic methods. He lists five journals and two French organizations devoted to theoretic biology. 6 references.

VIII. Other Aspects

"All animals are equal, but some..." [editorial]. ATLA 1987 Jun;14(4):274-5

The editorial calls on scientists "to try to choose that animal with which the suffering will be least in the obtaining of satisfactory results." 5 references.

Allan DJ ; Blackshaw JK. Ethics, welfare and laboratory animal management. Adv Anim Welfare Sci 1986-87:1-8

The authors, a pathologist and an animal behavior specialist, deal with the issues of animal rights and testing alternatives and discuss welfare considerations during the feeding-holding and experimental phases of laboratory animal management. 13 references.

Barnes DJ. The case against use of animals in science. Adv Anim Welfare Sci 1986-87: 215-25

Arguments against animal experimentation based primarily on the author's personal experiences as an experimental psychologist. 8 references.

Bingham B. Are animal tests justified? Lampada 1987 Spring;(11):36-8

The writer, an official of the British National Anti-Vivisection Society, maintains that animal experimentation is of no benefit and often causes severe harm to humans.

Bonnod J. [The alternative methods in animal experimentation. Evolution of laboratory animal use]. Sci Vet Med Comp 1986; 88(3):99-107 [Fre]

The writer traces the history of animal experimentation from Claude Bernard to the present. He believes that developments in the basic sciences will bring in vitro techniques into greater prominence.

Dawson J. Animal experiments: conference report. Br Med J [Clin Res] 1986 Jun 21; 292(6536):1654-5

Report on a seminar held by scientists and representatives of the Royal Society for the Prevention of Cruelty to Animals and moderate antivivisectionist organizations. The agenda included discussions of media coverage, local control committees, anesthesia, and animal behavior studies.

Feeney DM. Human rights and animal welfare. Am Psychol 1987 Jun;42(6):593-9

The author, a paraplegic scientist, searches for a compromise between the rights of the permanently ill or disabled to a cure through research and the welfare of laboratory animals. 15 references.

Hammer JG ; Miller B ; Ali F. An employee training program in research animal care and use. Lab Anim (New York) 1987 Sep; 16(6):53-7

Description of a training course for employees involved in the care and use of laboratory animals at the Medical College of Pennsylvania and a discussion of the College's animal care and use committee. 2 references.

Line SW. Environmental enrichment for laboratory primates. J Am Vet Med Assoc 1987 Apr 1;190(7):854-9

An essay on the definition and measurement of psychologic well-being in primates and its improvement by providing a naturalistic environment, group housing, and cage devices designed to encourage activity. 32 references.

Merrill GF. The case for the use of animals in medicine. Adv Anim Welfare Sci 1986-87: 227-43

A discussion of various animal species used in biomedical research followed by examples of medical advances made through animal experimentation. 69 references.

Odell R Jr. The physician's stake in animal research [letter]. JAMA 1986 Dec 26; 256(24):3347-8

A reply to Wyngaarden JB, "The physician's stake in animal research." [JAMA 1986 Aug 1;256(5):634-5] (*see* SBS No. 1987-1, p.14) Followed by Wyngaarden's response.

Osborne CA. Must animals play a role in teaching and research? Med Heritage 1986 Jul-Aug;2(4):296-8

The author presents arguments in favor of the humane use of animals in teaching veterinary students and in conducting biomedical research. He believes that abandoned animals have a place in teaching and research.

Reynolds DG. Are we doing our job? Presidential address, Ninth Annual Conference on Shock, the Shock Society, June 8-11, 1986, Scottsdale, Ariz. Circ Shock 1986;20(2):83-90

The address deals in part with animal experimentation. The speaker calls for increased efforts to refine animal experiments and to reduce the number of animals used. He discusses the animal rights movement and urges education of the public as to the benefits of animal experiments. 2 references.

Sharpe R. The cruel deception. Adv Anim Welfare Sci 1986-7:9-18

The author argues that progress in disease prevention rather than animal experimentation has advanced human health. 16 references.

Silverman J ; Barber LG. Public relations tactics in the debate over animal experimentation. Lab Anim (New York) 1987 Jan-Feb;16(1):21-6

Those who oppose as well as those who favor animal experimentation use certain methods to gain support from the public and from legislators. The authors examine these methods and discuss the rising intensity of the animal experimentation controversy. 16 references.

Sojka J. Listen to the animals. Lab Anim (New York) 1986 Sep;15(6):30-1

A discussion of the premise that the care of animals should and can be based on the preferences they express through their behavior.

Spinelli JS ; Morrish RH. Pain and discomfort. How to recognize and manage pain associated with animal research. Invest Radiol 1987 Apr;22(4):348-52

The authors deal with suffering, discomfort, emotional pain, and the characteristics and diagnosis of physical pain. They suggest methods to keep pain below the pain-tolerance threshold. 17 references.

Walvoort HC. Contribution of pathology to laboratory animal welfare. Lab Anim 1986 Oct;20(4):291-2

The author urges thorough postmortem examination of all experimental animals unexpectedly ill or dead. "The information thus obtained would promote a better understanding of the actual welfare of the animals during experiments..." and further the refinement of future research protocols. 4 references.

Will JA. The case for the use of animals in science. Adv Anim Welfare Sci 1986-87: 205-13

The writer, a veterinary research scientist, believes that society's as well as the individual's obligations to human welfare justify prudent and responsible animal experimentation. 5 references.

Proceedings

[Continuing education conference: the amended animal protection law]. DTW 1987 Feb 9;94(2):80-106 [Ger]

Twelve papers critically reviewing the 1986 amendment to the West German animal protection law. Topics included are: reasons for the amendment, limitation of the freedom to do research, criteria for approval of research applications, institutional animal welfare representatives, uses of animals for professional training, and government controlled animal welfare committees.

The ethics of animal experimentation. Proceedings of the second CFN symposium. Stockholm, Sweden, August 12-14, 1985. Acta Physiol Scand [Suppl] 1986;554:1-269

The symposium, sponsored by the Swedish National Board for Laboratory Animals (CNF), dealt with ethologic, philosophic, and ethical aspects of laboratory animal use and examined ethical issues related to education and cosmetics testing, as well as stress, shock, trauma, and burn research. Other topics were the regulation of animal experimentation in Canada, the United States, West Germany, Switzerland, the United Kingdom, Sweden, and Finland.

IABS symposium on reduction of animal usage in the development and control of biological products. London, UK, 24-26 April 1985. Dev Biol Stand 1986;64:1-324

The symposium, organized by the International Association of Biological Standardization (IABS), dealt with the reduction of animal use and with in vitro techniques in testing bacterial and viral biologics, assaying hormones and interferon, detecting bacterial toxins, and evaluating chemical products.

Monographs

Animal experimentation and animal rights. Compiled by Ruth Friedman. Phoenix, Ariz.: Oryx Press, 1987. 75p.

A selective annotated bibliography of 245 citations to English language acticles, book, and government documents published after 1979.

Effective animal care and use committees. Edited by F. Barbara Orlans, Richard C. Simmonds, W. Jean Dodds. Bethesda, Md.: Scientists Center for Animal Welfare, 1987. 178p. (Also published in Lab Anim Sci 1987 Jan;37(Special Issue):1-178)

Selected papers from five regional workshops sponsored by the Scientists Center for Animal Welfare during 1984-85. Topics addressed include current policies on animal care and use committees, committee objectives and procedures, roles of committee members, protocol review and animal pain, laboratory staff training, and the committees as seen by scientists, philosophers, and the public.

Fox, Michael Allen. The case for animal experimentation: an evolutionary and ethical perspective. Berkeley, Calif.: University of California Press, 1986. 262p.

A systematic philosophic exposition favoring a middle ground between unrestricted animal experimentation and its complete abolition. Nine months after the book's publication the author finds himself "...in radical disagreement with some of its major theses." (Fox MA. Author reverses views on animal rights. The Scientist 1986 Dec 15;1(3):10).

Lansbury, Coral. The old brown dog: women, workers, and vivisection in Edwardian England. Madison, Wis.: University of Wisconsin Press, 1985. 212p.

A historical discourse on the antivivisectionists riots in 1907 near London and the events leading to them.

Singer P. Animals and the value of life. In: Matters of life and death: new introductory essays in moral philosophy. 2nd ed. Edited by Tom Regan. New York: Random House, 1986. p.338-80.

A philosophic essay comparing the value of human and animal life and dealing with the morality of killing animals and conducting animal experiments.

Tierversuche: Dokumente der Parlamentarischen Auseinandersetzung zur Tierschutz-Novelle 1986 [Animal experiments: documentation of the parliamentary dispute concerning the 1986 animal welfare law]. Edited by Horst Gerold. Berlin (West): Vistas, 1987. 357p.

The 1986 West German animal welfare law and documents pertinent to its passage in parliament followed by position papers by animal welfare, scientific, industrial, and religious organizations.

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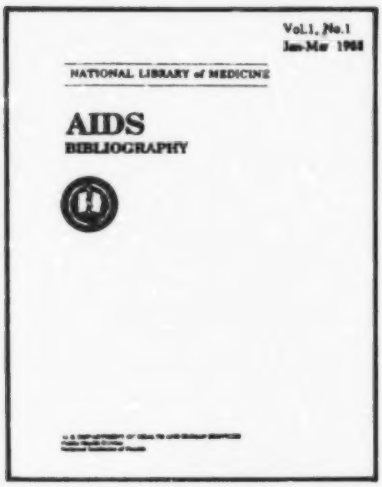

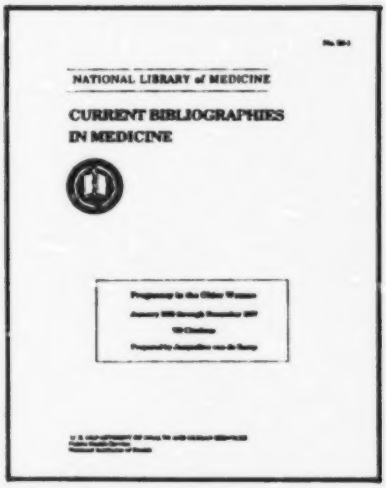

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